

IN THE CLAIMS:

Please amend Claims 1, 11, 12, 15, 16, 18 and 19 as shown.

Claim 1 (Currently Amended): A storage apparatus for storing samples on containers inside a chamber adjusted to predetermined ambient conditions, the storage apparatus being characterized in that a container transport device is disposed inside the chamber centrally thereof and comprises a transport table for placing the container thereon, and a drive mechanism for driving the transport table in the direction of X-axis and the direction of Y-axis which are orthogonal on a horizontal plane, and in the direction of Z-axis orthogonal to these directions, a container accommodating rack being disposed on each of opposite sides of the transport device which sides are along the direction of X-axis, the accommodating rack having container accommodating portions, with all said container accommodating portions being arranged, at all times, solely along one plane including Y-axis and Z-axis in the direction of Y-axis and in the direction of Z-axis for accommodating therein respective containers, the container being movable into or out of the desired container accommodating portion of the desired rack by the transport device.

Claim 2 (Original): A storage apparatus according to claim 1 wherein the chamber is provided with a gas outlet facing toward a central space surrounded by the accommodating racks on the opposite sides for discharging therefrom a gas for adjusting the inside of the chamber to the predetermined ambient conditions.

Claim 3 (Original): A storage apparatus according to claim 1 wherein the container accommodating rack comprises a plurality of stackers arranged in the direction of Y-axis, and each of the stackers comprises container accommodating portions repeatedly provided in the direction of Z-axis.

Claim 4 (Original): A storage apparatus according to claim 3 wherein the chamber has an opening facing toward the direction of Y-axis and a door for closing the opening, and the plurality of stackers constituting the accommodating rack are mounted on a drawer installed on a base and slidable in the direction of Y-axis, the plurality of stackers being withdrawable through the opening along with the drawer, with the door opened.

Claim 5 (Original): A storage apparatus according to claim 1 wherein the chamber has a container inlet for transporting the container into the chamber therethrough, and the container inlet has a container carriage mechanism connected thereto.

Claim 6 (Original): A storage apparatus according to claim 5 wherein the chamber has attached thereto a shutter mechanism for opening and closing the container inlet.

Claim 7 (Original): A storage apparatus according to claim 5 wherein the chamber is provided with an air curtain mechanism for producing an air stream curtain for the container inlet.

Claim 8 (Original): A storage apparatus according to claim 1 wherein the drive mechanism of the container transport device comprises an X-axis transport assembly for driving the transport table in the direction of X-axis, a Y-axis transport assembly for driving the transport table in the direction of Y-axis and a Z-axis transport assembly for driving the transport table in the direction of Z-axis, and the Y-axis transport assembly comprises a reciprocating movable body for reciprocatingly moving the transport table along the direction of Y-axis, the reciprocating movable body having a lower end portion and an upper end portion engaged respectively with a lower guide rail and an upper guide rail which extend in the direction of Y-axis.

Claim 9 (Original): A storage apparatus according to claim 1 wherein the drive mechanism of the container transport device uses a belt drive mechanism of stainless steel for the transmission of power.

Claim 10 (Original): A storage apparatus according to claim 1 wherein the container transport device has its operation controlled by a drive control device and moves the transport table in the direction of Y-axis and direction of Z-axis at predetermined timing to thereby promote the circulation of air inside the chamber.

Claim 11 (Currently Amended): A storage apparatus for storing samples on containers inside a chamber having ambient conditions adjusted by an environment adjusting device, the storage

apparatus being characterized in that the chamber has arranged therein a container accommodating rack having a plurality of container accommodating portions and a container transport device for transporting the container inside the chamber, a motor serving as a power source for the container transport device and being accommodated in a motor case having a closed interior space and disposed inside the chamber together with a main body portion of the container transport device, wherein air is introduced from outside the chamber into the motor case and discharged from inside the motor case to outside the chamber to circulate through the interior space of the motor case.

Claim 12 (Currently Amended): A storage apparatus according to claim 11 wherein ~~the motor serving as the power source for the container transport device is accommodated in a motor case having a closed interior space, and~~ the motor case has connected thereto an air admitting hose for introducing air into the motor case and a vent hose for discharging air from inside the motor case to circulate air through the interior space of the motor case.

Claim 13 (Original): A storage apparatus according to claim 11 wherein the motor serving as the power source for the container transport device is connected to a drive control device and is supplied with drive current and a revolution number control signal, and the drive control device feeds a revolution number zero control signal and drive current to the motor of the transport device at a suitable time while a container transport operation is discontinued so as to maintain the motor at a temperature not permitting condensation of water vapor by energizing the motor.

Claim 14 (Original): A storage apparatus according to claim 13 wherein the drive control device feeds the revolution number zero control signal and the drive current to the motor for a specified period of time after the environment adjusting device is brought out of operation.

Claim 15 (Currently Amended): A storage apparatus ~~for storing samples on containers inside a chamber adjusted to predetermined ambient conditions, the storage apparatus being characterized in that~~ according to claim 1 wherein one or a plurality of stackers can be arranged inside the chamber for accommodating containers therein, each of the stackers being provided with identification information for identifying the stacker, the storage apparatus comprising:

- an apparatus body,
- storage means for storing the identification information therein,
- means for reading the identification information provided on the stacker,
- information processing means for storing the read identification information in the storage means, and
- control means for controlling the operation of the apparatus body with reference to the identification information stored in the storage means.

Claim 16 (Currently Amended): A storage apparatus according to claim 15 wherein ~~the stacker has arranged therein a plurality of container accommodating portions each for placing the container thereinto, and the apparatus body comprises a container transport device installed inside the chamber, the container being movable into or out of the desired accommodating portion in the desired stacker by the container transport device, the operation of the container transport device~~ being is controllable by the control means based on the identification information.

Claim 17 (Original): A storage apparatus according to claim 15 wherein the apparatus body has an information display device, and the information processing means stores maintenance management information for managing stacker maintenance time in the storage means along with the stacker identification information, the control means being operable to monitor the maintenance time for the plurality of stackers arranged inside the chamber based on the stacker identification information and the maintenance management information and to give the information display device a command to display arrival of the maintenance time upon the arrival of the time to maintain the stacker.

Claim 18 (Currently Amended): A storage apparatus ~~for storing samples on containers inside a chamber adjusted to predetermined ambient conditions, the storage apparatus being characterized in that one or a plurality of container accommodating racks are arranged inside the chamber,~~ according to claim 1 wherein each of the containers ~~being is~~ provided with identification information for identifying the container, the storage apparatus comprising:

an apparatus body,
storage means for storing the identification information therein,
means for reading the identification information provided on the container,
information processing means for storing the read identification information in the storage
means, and
control means for controlling the operation of the apparatus body with reference to the
identification information stored in the storage means.

Claim 19 (Currently Amended): A storage apparatus according to claim 18 wherein ~~the container accommodating rack has arranged therein a plurality of container accommodating portions each for placing the container thereinto, and the apparatus body comprises a container transport device installed inside the chamber, the container being movable into or out of the desired accommodating portion in the desired accommodating rack by the container transport device, the operation of the container transport device being~~ is controllable by the control means based on the identification information.

Claim 20 (Original): A storage apparatus according to claim 19 wherein the chamber has a container inlet for placing the container into the chamber therethrough, and the container inlet has a container carriage mechanism connected thereto, the identification information reading means being provided as opposed to the container inlet.

Claim 21 (Original): A storage apparatus according to claim 18 wherein the apparatus body has an information display device, and the information processing means stores delivery management information for managing the time to deliver the container in the storage means along with the container identification information, the control means being operable to monitor the delivery time for the plurality of containers arranged inside the chamber based on the container identification information and the delivery management information and to give the information display device a command to display arrival of the delivery time upon the arrival of the time to deliver the container.